Faulting – Building Mountains Activity

1. What happens when the earth's crust is pulled apart? Do you think this could make mountains?
2. a. Hold 5 or 6 hardbound textbooks upright on a desk (binding vertical). The books represent the Earth’s crust and the spaces in between them represent faults in the crust. If there are horizontal lines on the book bindings tell students that these represent sedimentary layers.   
   b. Measure the width of the books horizontally. Place a ruler across the top of the books and measure the width beginning with the first book on the left and ending with the last book on the right.   
   c. Move one hand so that the books tilt to one side at a 30-45 degree angle. Once again have the student measure the horizontal width using the same technique as above.   
   d. This models stretching of the crust. Gravity actually did all the work as the books slid and tilted, but the “crust” was essentially pulled apart ("tension"). As tension was applied to the books, the surface stretched and two changes occurred
   1. ***the “crust” increased in surface area as it stretched to fill in the space***
   2. ***the “crust” changed shape as the tilted blocks (books) now exhibit high peaks and low valleys in place of its formerly flat surface.***

e. Look at the model from the top. You should see that the mountains are long and range-like.

BE ABLE TO ANSWER THESE:

1. Recall what caused compression of the Earth's crust (plates moving toward one another at convergent plate boundaries). What might cause this stretching to take place?
2. Make a before and after drawing of this demonstration, labeling the valleys and mountains, on page 9 in their journals.
3. Review and Reflection: Answer the questions on page 9 of their journals.

Now go to building Paper Models link on

Begin construction of 4 main types of models – using page 11,12 as needed